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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/680,200	10/08/2003	Kazuki Takemura	Q77795	5292

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EXAMINER	
ASINOVSKY, OLGA	
ART UNIT	**PAPER NUMBER**
1711	

DATE MAILED: 07/13/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	**Application No.** 10/680,200	**Applicant(s)** TAKEMURA, KAZUKI	
	Examiner Olga Asinovsky	**Art Unit** 1711	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE *3* MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *28 April 2005*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-6 and 8-13* is/are pending in the application.

4a) Of the above claim(s) *10-13* is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-6,8 and 9* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *08 October 2003* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☒ All b)☐ Some * c)☐ None of:

1.☒ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

This case has been transferred to other examiner within the same Art Unit. The new examiner is Olga Asinovsky, telephone 571-272-1066.

The cancellation of claim 7 is noted.

There was a Restriction requirement in the case 10/680,200 between the composition claims 1-9, Group I, and a process of making said composition, claims 10-13, Group II. A provisional election was made without traverse on September 2004 to prosecute the invention of Group I, claims 1-9, Office action mailed on 11/04/2004.

The applicant's response, amendment and remarks of 04/28/2005 after non-final action are considering.

1. Applicant did not distinctly and specifically point out the supposed errors in the restriction requirement, the election has been treated as an election without traverse (MPEP § 818.03(a)).

Claim Rejections - 35 USC § 112

2. Claim 1 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

The term "hydroxyl" is not referring to an ingredient or a compound. It is not clear what applicant intends thereby. The examiner is confusing what to search. The term "hydroxyl"=hydroxy- is a radical -OH of a hydroxyl-functional organic compound.

Compound containing the OH^- ion (like the ion of the hydroxide compound NH_4OH) is different from a compound containing a hydroxyl radical of organic compound. From the present specification at page 8, lines 19-23, the "hydroxyl" are obtained by the reaction of hydroxide of the transition metal by precipitation on the surface of magnesium hydroxide particles. See also Reference to Kurisu et al '5,766,568 in the rejection below. And, also, see Reference to Hoshi et al '4,732,939 in the rejection below. In light of the unclear definition of "hydroxyl", a thermoplastic composition in claim 1 is indefinite. Claims 1-6 and 8-9 are under examination. Q. A

Claim Rejections - 35 USC § 102

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

4. Claims 1-3, 6 and 8-9 are rejected under 35 U.S.C. 102(e) as being anticipated by Kato et al U.S. Patent 6,605,655.

Kato discloses a polyamide resin composition comprising a melt blend of (A) a polyamide resin, (B) a phyllosilicate, and (C) an olefin compound having a carboxylic acid anhydride group in the molecule, col. 1, lines 42-50; col. 6, lines 10-47. The resin composition comprises inorganic filler (D) including hydroxides such as magnesium hydroxide, calcium hydroxide, aluminum hydroxide, col. 6, lines 57-58; col. 7, lines 2-3;

col.10, line 49. The composition includes inorganic filler such as magnesium hydroxide, calcium hydroxide, aluminum hydroxide, col. 7, lines 2-3. The resin composition may contain a flame retardant component (F) including halogen flame retardants and phosphorus-type flame retardants, including zinc hydroxide, nickel, manganese, col. 9, lines 32-34, 47-51 and col. 10, lines 38, 40 and 50. The flame-retardant polyamide resin composition comprises a flame-retardant promoter including zinc oxide and metal borates, col. 12, lines 27- 39. The inorganic filler may be previously processed with any known coupling agent such silane coupling agent, col. 7, lines 35-50, col. 30-67, col. 4, lines 1-67 and col. 5, lines 1-67. The chemical reaction occurs between the functional group of an olefin compound and reactive functional group-having coupling agent for producing OH ion-exchanging, col. 3, lines 49-50; col. 5, lines 21-37. Thus, the "hydroxyl" radical is obtained in Kato invention. The amount of the inorganic filler is between 1 and 300 parts by weight based on 100 parts by weight of the resin, col. 7, line 19. The amount of the flame retardant, in terms of the halogen content, is between 0.1 and 25 parts by weight to 100 parts by weight of the composition, col. 9, lines 47-50. The amount of the phosphorus-type flame retardant that may be in the resin composition is between 0.1 and 50 parts by weight based on the 100 parts by weight of the composition, col. 10, lines 1-6. The amount of the flame retardant promoter more preferably falls between 1/20 and 4/5, in terms of the ratio by weight of the promoter to the flame retardant, col. 12, lines 35-39. The claimed requirement in the present claim 1 that metal borate being present in the amount of 1 part by weight or more and 30 parts by weight or less for 100 parts by weight of the thermoplastic resin is readable in Kato invention.

Claim Rejections - 35 USC § 103

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

6. Claims 4-5 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kato et al U.S. Patent 6,605,655 as applied to claims 1-3, 6 and 8-9 above, and further in view of Miyata U.S. Patent 5,480,929 or Kurisu et al U.S. Patent 5,766,568.

Kato does not disclose the metal hydroxide surface coated with hydroxide of transition metals for the present claims 4 and 5.

Miyata discloses a composite metal hydroxide of the formula (I) at column 2, which is a solid solution of calcium hydroxide and/or magnesium hydroxide is treated with metal hydroxide such that said metal can be selected as Mn, Zn, Ni by a precipitation method, col. 5-49; col. 60-67; col. 4, lines 55-56; col. 5, lines 40-47; col. 6, lines 3-48-30, 43-45, 57-63.

Kurisu discloses a composite metal hydroxide obtained by reacting magnesium-containing aqueous solution with zinc and/or nickel transition metal, formula (I) and (2) at column 2.

References disclose flame-retardant resin composition. It would have been obvious to one of ordinary skill in the art to modify a thermoplastic resin composition in Kato invention by including a flame-retardant composite metal hydroxide as discloses by Miyata or Kurisu for the purposes to improve flame retardant properties and mechanical strength as discussed in Miyata invention or Kurisu invention.

7. Claims 1-6 and 8-9 are rejected under 35 U.S.C. 103(a) as being unpatentable over Miyata U.S. Patent 5,480,929 or Kurisu et al U.S. Patent 5,766,568 each in view of Kato et al U.S. Patent 6,605,655.

All references are discussed above.

In addition, Miyata discloses that a thermoplastic resin and rubber used as a flame-retardant composition includes thermoplastic resins such as a polyolefin copolymer, polystyrene, poly(meth)acrylate, polyester and thermoplastic elastomer, col. 6, lines 8-22.

The difference between the present claims and Miyata is that Miyata does not disclose a borate.

In addition to Kurisu, reference discloses a high-molecular weight thermoplastic resins and rubbers including a copolymer of polyethylene or ethylene with other alpha-olefin, polystyrene, poly(meth)acrylate, polyester and thermosetting resins, col. 6, lines 35-50.

The difference between the present claims and Kurisu is that Kurisu does not disclose a borate.

Kato discloses a thermoplastic resin composition having flame-retardant properties. All discussions of Kato invention are adequately set here. Kato discloses a flame retardant ptomoter including metal oxides (including zinc oxide) and metal borates including sodium borate, zinc borate, magnesium borate, calcium borate, magnesium borate. Kato discloses that the ratio of the borate is selected for obtaining the desired effect resistant to flames, col. 12, lines 36-44.

It would have been obvious to one of ordinary skill in the art to modify the flame-retardant composition in each reference to Miyata and Kurisu by employing a borate such as a flame retardant promoter by teaching in Kato invention for the purposes to enhance the flame retardancy of a composition, because any addition flame-retardant component is a benefit for obtaining the desirable flame retardancy property, see Kato, col. 12, lines 55-61; and, also, it would be obvious to select the borate compound in sufficient amount as disclosed in Kato invention, col. 12, lines 36-44.

8. Claims 1-6 and 8-9 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hoshi et al U.S. Patent 4,732,939 in view of Kato et al U.S. Patent 6,605,655.

Hoshi discloses a flame-retardant olefinic resin composition comprising ethylenic polymer resin mixture (1) and a hydrated metal compound (2), col. 3, lines 24-67; col. 4, lines 1-67, col. 8, lines 65-66. The hydrated metal compound is mixed and kneaded with the ethylenic polymer mixture and a silane-grafted polymer having the silanol groups (Si-OH), col. 7, lines 4-8. Thus, the "hydroxyl" radical can be present. The hydrated metal compound includes aluminum hydroxide, magnesium hydroxide, calcium hydroxide, and zinc borate, col. 6, lines 55-68 and col. 7, line 3. The hydrated metal compound can also be surface treated with a silane coupling agent having terminal functional-reactive group. The silane coupling agent is capable of reacting with organic substances, col. 7, lines 31-48.; col. 9, lines 52-64 and col. 12, lines 15-16.

Hoshi does not disclose a transition metal.

In light of Kato invention flame-retardants can include zinc hydroxide, nickel and manganese, col. 10, lines 38-41. It would have been obvious to one of ordinary skill in the art to employ a transition metal such as zinc hydroxide, nickel or manganese as discussed in Kato invention into a flame-retardant composition in Hoshi for the purposes to improve resistant to flames since any addition hydrated metal represented by the general formula at column 6, line 58 in Hoshi would be expected in Hoshi invention to impart flame retardancy and mechanical properties.

There is no description of Drawings in the present specification.

In light of the new cited references, this action is not final.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Olga Asinovsky whose telephone number is 571-272-1066. The examiner can normally be reached on 9:00 to 5:30 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, James Seidleck can be reached on 571-272-1078. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Olga Asinovsky
Examiner
Art Unit 1711

O.A
July 08, 2005

James J. Seidleck
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